

Appl. No. 10/034,464
Amdt. dated October 26, 2004
Reply to Office action of August 26, 2004

REMARKS/ARGUMENTS

Receipt of the Office action dated August 26, 2004 is hereby acknowledged. In that action, the Examiner: 1) rejected claims 29, 33 and 35 as allegedly unpatentable over Ziegler (U.S. Pat. No. 6,182,176) in view of Olnowich (U.S. Pat. No. 6,122,659); 2) allowed claims 1-28 and 44-72; and 3) objected to claims 30-32, 34 and 36.

With this Response, Applicants cancel non-elected claims 37-43, amend claims 3, 29-30, 34, 36, 44, 46, 49, 51-61, 66-68 and 71-72, and present new claims 73-75. Reconsideration is respectfully requested.

I. AMENDMENTS TO THE SPECIFICATION

With this Response, Applicants present a plurality of amendments to the specification. The amendments to paragraph [0013] are to obviate any interpretation from the specification of skill needed to construct a claimed system. The amendment to paragraph [0020] is to obviate any interpretation from the specification as to what was known prior to the benefit of reading the current specification. The amendments to paragraph [0025] are to correct typographical and grammatical errors. The amendment to paragraph [0028] is to obviate any interpretation from the specification of skill needed to construct a claimed system. No new matter is presented by these amendments.

II. CLAIM CANCELLATIONS

With this Response, Applicants cancel claims non-elected claims 37-43. This cancellation is without prejudice to later asserting this claims, such as in a divisional application.

III. ALLOWED AND EFFECTIVELY ALLOWED CLAIMS

The Office action dated August 26, 2004 indicates allowance of claims 1-28 and claims 44-72. With this Response, Applicants amend claim 3 to remove the "adapted to" terminology. Applicants also amend claims 44, 46, 49, 51-61, 66-68 and 71-72 to put the various limitations in proper means-plus-function form, to ensure construction of these limitations under 35 U.S.C. § 112, sixth paragraph. Claim 59 is also amended to remove the "adapted to" terminology. These are not narrowing amendments, and no new matter is added.

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Further, the Office action dated August 26, 2004 indicated claims 30-32, 34 and 35 were dependent upon a rejected base claim, but would be allowable if rewritten into independent form. With this Response, Applicants rewrite claims 30, 34 and 36 into independent form, including the limitations of the base claim and any intervening claims. It is noted that these claims already contained these limitations by virtue of their previous dependencies, and thus are not narrowing amendments. Claims 31 and 32 depend from claim 31. Thus, claims 30-32, 34 and 35 should now be in a condition for allowance.

IV. CLAIM REJECTIONS

A. Claim 29

Claim 29 stands rejected as allegedly obvious over Ziegler in view of Olnowich. Applicants amend claim 29 to remove much of the terminology of the preamble, and to more fully define over Ziegler.

Ziegler is directed to a queue-based predictive flow control mechanism. (Ziegler Title). In Ziegler, an I/O module 116 couples to a processor 120 and a memory controller by way of a bus 112. (Ziegler Figure 2). Olnowich is directed to a memory controller for controlling accesses across networks in distributed shared memory processing systems. (Olnowich Title). In the rejection of claim 29, the Office action relies on Olnowich only for notifying aspects of coherency systems. (See Office action dated August 26, 2004, page 3, second full paragraph).

Claim 29, by contrast specifically recites, "allowing a hardware device, coupled to a microprocessor and main memory by way of a bridge device, to participate in a coherency domain of a computer system by the hardware device having a coherent cache memory duplicating a cache line of a FIFO buffer of the main memory; writing information to the cache line of the FIFO buffer by a software stream; and notifying the hardware device that the information is available in the FIFO buffer by invalidating the duplicate copy of the cache line of the FIFO buffer in the onboard cache memory of the hardware device." Ziegler teaches away from such a system by expressly having the I/O module on the same bus 112 as the processor 120 and memory controller 114, and teaching,

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Each processing module on the bus that must participate in coherency testing includes circuitry that monitors the bus (i.e., it "snoops" or "eavesdrops" on the bus) and detects coherent transactions....

(Ziegler Col. 4, lines 33-36). Thus, Ziegler taken with Olnowich do not teach or suggest "allowing a hardware device, coupled to a microprocessor and main memory by way of a bridge device, to participate in a coherency domain of a computer system ... and notifying the hardware device that the information is available in the FIFO buffer by invalidating the duplicate copy of the cache line of the FIFO buffer in the onboard cache memory of the hardware device."

Based on the foregoing, Applicants respectfully submit that claim 29 is not rendered unpatentable by Ziegler and Olnowich, and should be allowed together with claims 33 and 35 that depend from claim 29.

V. NEW CLAIMS

With this Response Applicants present new claims 73-75. Applicants respectfully submit that these claims are not rendered unpatentable by the cited art.

VI. CONCLUSION

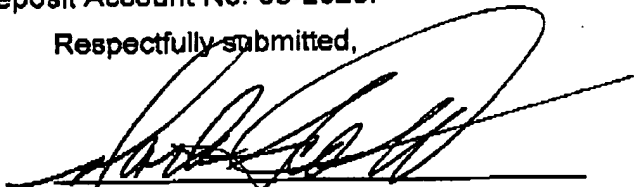
In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicants respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are

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hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



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